REMARKS

Claims 1 - 26 remain active in this application. Claims 1 and 26 have been editorially amended. New dependent claims 27 - 29 have been added to more fully define the subject matter regarded as the invention. Support for the new claims is found throughout the application, particularly in Figure 7 and the description thereof (e.g. step 73) on pages 9 and 11. No new matter has been introduced into the application.

Claims 25 and 26 have been rejected under 35 U.S.C. §101 as being drawn to non-statutory subject matter. This ground of rejection is respectfully traversed, particularly as being moot in view of the amendment to claim 26, made above.

It has been recognized for many years that special purpose structure having a particular utility can be emulated using specially programmed general purpose structure and, as such, the specially programmed general purpose structure, when so programmed to have particular utility, was patentable for that reason even though all elements so emulated may not exist at any given point in time during operation. See, for example, In re Prater, 162 USPQ 541 (CCPA 1962). Therefore, since claims 25 and 26 clearly recite that the claimed program module emulates structure having particular utility (e.g. calculating and displaying a characterizing strength of a text in response to an input query) these claims are directed to manifestly statutory subject matter.

It is respectfully submitted that the Examiner may have been confused in the analysis of this subject matter by the possible connotation of the word "module" as indicating that the software module only has effects or can be observed within the internal processing of the computer. However, such is clearly not the case in view of the explicit recitation of the display of the

result such that the user may evaluate the relative relevance of documents to an original query. By the same token, many decisions construing 35 U.S.C. §101 have focused on the nature of the particular utility provided by the software and whether of not it was related to any tangible or "real world" results outside the computer which, unfortunately, tends to obscure the fact that delivering useful results to a user based on an analysis of data has patentable utility in and of itself, as is the case here.

Nevertheless, Applicants have no objection to rendering the issue moot by amending claim 25, in the manner suggested by the Examiner. Accordingly, it is respectfully submitted that, on the record, this ground of rejection is no longer tenable and reconsideration and withdrawal of the same is respectfully requested.

Claims 1 - 5 and 7 - 10 have been rejected under 35 U.S.C. §102 as being anticipated by Binnig et al. Claims 6, 16, and 25 - 26 have been rejected under 35 U.S.C. §103 as being unpatentable over Binnig et al. in view of Goldman et al. Claims 11 - 13 have been rejected under 35 U.S.C. §103 as being unpatentable over Binnig et al. in view of Manelski et al. Claim 14 has been rejected under 35 U.S.C. §103 as being unpatentable over Binnig et al. in view of Bessho et al. Claim 15 has been rejected under 35 U.S.C. §103 as being unpatentable over Binnig et al. in view of Feigenbaum et al. Claims 17 - 24 have been rejected under 35 U.S.C. §103 as being unpatentable over Binnig et al. in view of Braden-Harder et al. All of these grounds of rejection are respectfully traversed.

As previously pointed out, Binnig et al. is assigned to the assignee of the present invention and provides an alternative approach to much he same problem as the present invention. While the approach of Binnig et al. is an effective solution to the problem of determining probable relevance of a document

retrieved through a search in response to a given query, it differs in significant ways, particularly in regard to simplicity of computation, from that claimed.

In particular, while Binnig et al. determines syntactical units and determines their relationship while refining the weights or syntactical distances accorded to the relationships between the syntactical units, it is not at all clear that Binnig et al. actually forms a graph or even a virtual graph of the text under analysis. The weights derived and refined through evaluation of context of other reference to similar syntactical units as described in paragraph [0068] of Binnig et al. relied on by the Examiner, is clearly not an evolution of the graph, *per se*, such as by certain substitutions of removal of words or syntactical units whereby the graph, *itself*, is changed by removal or change of nodes or links or their interrelationship, but only refinement of the values assigned to the syntactical distances. Such a refinement of weights results in a number of relatively high resolution weight values which is not significantly reduced in number from that of the original analysis and which may be combinatorially and/or computationally difficult to combine into a numerical characterizing strength. Note, for example, when multiple links are involved, the semantical distance collectively represented by the multiple links must be combined by taking the product of the weights of the individual links or the like as explicitly disclosed at paragraph [0019]. Moreover, as is further discussed explicitly in paragraph [0019], the weights of links including links formed of multiple links are computed and the result compared with a threshold in order to determine which links can be ignored.

The invention, in sharp contrast therewith, evolves the graph by simplifying it using certain rules to the point where such a characterizing strength

(which may or may not be more accurate than that developed by Binnig et al. but of an accuracy certainly at least comparable therewith) may then be computed by mere counting (or some other simplified algorithm) of links, the number of which has been minimized and which are all of equal weight for single links, double links etc., respectively. Such a process is clearly less computationally intensive and can achieve usable results faster than more complex approaches such as that of Binnig et al.

In summary and simply put, it is respectfully submitted that Binnig et al. does not teach or suggest "evolving *a graph*" (but, at best, only refinement of weights assigned to syntactical links but without significantly alter the *existence* of particular nodes or links) and it is not even clear that a graph (or even a virtual graph) results from the analysis of Binnig et al. Even if it is considered (*arguendo*) that refining values of links could be considered to answer the recitation of "evolving the graph", the "neighborhood" is not determined on the basis of a particular number of links but, rather, on the computed weight of combined multiple links as compared with a threshold. Accordingly, it is respectfully submitted that Binnig et al. does not, in fact, anticipate any claim in the application. In particular, it is respectfully submitted that Binnig et al. does not anticipate any of new claim 27 - 29 which clearly emphasize the *graphical* evolution of the graph distinguishing the present invention.

The above deficiencies of Binnig et al. to anticipate the present invention are not mitigated by the secondary references applied, as previously pointed out. For obviousness to be *prima facie* demonstrated, the recitations of the claims must be as fully answered as in a rejection for anticipation even though the Examiner may rely on the evidence in regard to the

state of the art provided by more than one document. In this regard, however, a proposed modification is improper under the precedent of In re Gordon, 221 USPQ 1125 (Fed. Circ., 1984) if the modification would preclude the function in the intended manner of the subject matter of a reference relied upon.

In this regard, and as previously discussed, Braden-Harder appears to be the only secondary reference now applied which contemplates even "morphing" of a syntactical tree while falling far short of and "evolving" thereof, particularly for simplification, definition of a neighborhood or computation of a characterizing strength as is particularly evident from the passage of Braden-Harder beginning at column 12, line 30, as pointed out in the response filed July 22, 2005, which is hereby fully incorporated by reference. Moreover, such a "morphing" is respectfully submitted to be antithetical to the concept of refining values of substantially invariant links, central to the concept and intended operation of Binnig et al.

Conversely, the secondary references to Goldman et al., Bessho et al., Manelski and Feigenbaum do not mitigate the basic deficiencies of Binnig et al. and the Examiner has not asserted that they do. Goldman et al. is apparently cited only for a teaching of display of the characterizing strengths which the Examiner admits is no explicitly taught in Binnig et al. (which also admits the impropriety of the rejection for anticipation by Binnig et al. of, for example, claim 1). Manelski is cited by the Examiner only for teaching replacement of auxiliary verbs with main verbs which is an improper proposed modification of Binnig et al. under In re Gordon, *supra*. Likewise, Bessho et al. is cited only for teaching use of the subject of a sentence as the central node in a graph which would be a similarly improper proposed modification under the

precedent of In re Gordon, *supra*, while still failing to answer the actual and explicit claim recitations of claim 14 which clearly call for such placement to be done as a *modification* of an at least partially evolved graph by virtue of the recitation of performing such placement prior to step d.). Feigenbaum is apparently cited only for teaching of identification of "second neighbors" which is also respectfully submitted to be an improper proposed modification which determines neighborhoods based on thresholds which are, in turn, based upon combinations of links and the combinatorial valuations thereof in Binnig et al. and on which Binnig et al. clearly and explicitly relies in order to function as intended.

Therefore, it is again respectfully submitted that the Examiner has not made a proper *prima facie* demonstration of obviousness of any claim in the application. All of the grounds of rejection asserted in the present action are in error and untenable particularly since they, first, seek to construe Binnig et al. to conform to the present invention and contrary to the explicit disclosure thereof and, second, propose modifications which are clearly improper under the precedent of In re Gordon, *supra*, and which, in many instances still fail to answer the explicit recitations of the claims. Accordingly, reconsideration and withdrawal of the same are respectfully requested.

Since all rejections, objections and requirements contained in the outstanding official action have been fully answered and shown to be in error and/or inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the provisions of 37 C.F.R. §1.111(b) and such reconsideration is respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No. 50-0510 of International Business Machines Corporation (Yorktown).

Respectfully submitted,

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